



ENVIRONMENTAL  
SERVICES  
INC.

May 18, 1989

Doug Grimmer  
Property Manager  
Baker Properties  
485 Washington Avenue  
Pleasantville, NY 10570

Re: Field Sampling Investigation  
Town of Cortlandt Property  
IT Proposal #3115

Dear Mr. Grimmer:

IT Environmental Services, Inc. (IT) is pleased to present our proposal for phase I and II of a field sampling investigation to be performed on the Baker Property in the Town of Cortlandt, Westchester County, NY.

The initial two phases will involve a sampling plan to determine the extent of contamination. Phase I will yield results to define and plan Phase II. Combined, Phase I and II results, will be used to prepare a remediation plan for the property. The remediation plan will include a technical approach and budgetary cost estimates.

IT is capable of complete investigative and remedial services for this project.

If you have questions or a start date, please call me at my office.

Sincerely,

Vaugh J. Brennan III  
Account Representative

SB/dg  
Enclosure

SB.159

FIELD SAMPLING INVESTIGATION  
BAKER PROPERTIES  
CORTLANDT, NEW YORK

MAY 18, 1989  
IT PROPOSAL #3115

Respectively Submitted To: Douglas Grimmer  
Baker Properties  
485 Washington Avenue  
Pleasantville, NY 10570

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## 1.0 FIELD SAMPLING PLAN

In order to properly assess the extent of contamination present at the site a sampling and analysis program will be implemented. The program will be divided into two phases. Phase I will consist of the collection and analysis of samples from the leaching field, concrete outfall box, a chip sample from the floor of the building, and sediment sample from the stream. All samples, liquid and solid will be analyzed for H.S.L. volatiles, HCL metals, cyanide and phenol. Samples will be properly preserved in the field prior to shipment within 24 hours to the selected lab. A flow study will also be conducted as part of Phase I. Dye will be poured down the drains of the building in an effort to delineate affected areas.

Phase II will be conducted after the Phase I analytical data base has been reviewed. One possible approach, would be the collection and analysis of split spoon samples. A borehole would be advance to a selected depth and a split spoon samples approach would indicate the vertical and horizontal extent of possible contamination.

### Phase I Sampling Methodology

#### Leaching Fields

There are four (4) access points to the leaching field located to the west of the building. If present, both the liquid and solid phase would be collected and analyzed. A two inch diameter Lexan tube will be advanced through the liquid into the sediment until resistance is encountered. The tube will then be retracted from the access point. The liquid will be decanted and collected in an approved container. The solid matrix will then be removed and the top 0-6 inch layer will be collected and analyzed. If no liquid is present. The sediment/soil will be collected with a decontaminated 3.25 inch stainless steel hand auger advanced from 0-6 inches.

As with all sediment/soil sample collection the samples destined for volatile analysis will be collected first. The sample will then be thoroughly mixed on a Whatman bench coat pad and collected in an approved container.

#### 1.2 Outfall box aqueous sample collection

A concrete outfall box is located on the west face of the building. It is filled with liquid. The liquid will be sampled using a decontaminated teflon bailer. Samples will be placed in approved container and properly preserved.

#### 1.3 Stream sediment sample collection

The stream located west of the building flows from south to north. Three sediment samples will be collected. One sample from upstream, one sample from a suspected runoff area from the building and one from downstream. A sediment sample will also be collected from the stream which flows along the sites northern border. The location of this sample will be made by the field sampling specialist. The samples will be collected with a decontaminated 3.25 inch stainless steel hand auger advanced from 0.6 inches.

#### 1.4 Building concrete chip sample collection

The location of the concrete chip sample collected on the floor of the building will be decided based on site observation at the time of sample collection. The sample will be collected by hand with a decontaminated chisel.

### 2.0 EQUIPMENT DECONTAMINATION

All reusable sampling equipment, including hand augers, split spoons and stainless steel spoons used by IT FAS will be thoroughly decontaminated between each sample using the following widely accepted protocol:

- Non-phosphate soap and water wash
- Tap water rinse
- Deionized water rinse
- 10 percent HON<sub>3</sub> rinse
- Deionized water rinse
- Acetone rinse
- Air dry
- Deionized water rinse

### 3.0 SAMPLE DOCUMENTATION AND QA/QC

Sample integrity is maintained by IT FAS through proper sample handling in the field as well as thorough documentation.

In addition to the equipment decontamination procedures outlined, latex gloves are worn and changed between each sample collection to prevent cross contamination. Laboratory clean containers are used for sample collection. IT uses I-Chem "200" Series containers which are cleaned to meet EPA specifications for cleanliness. All equipment decontamination rinsate will be collected and eventually analyzed prior to proper disposal.

All samples are completely documented in the field using the IT Sample Collection Log and will include maps, drawings, and descriptions of the sampling location, sample date and time, well water collection sheets, as well as the volume and type of sample collected. In addition, each sample will be assigned a unique ID number for future reference purposes. All samples collected will be placed in coolers with ice packs for transport to the IT laboratory.

IT chain of custody and request for analysis forms will be completed on site for each day sampling occurs to accompany the

samples to the laboratory. All sample coolers will be sealed with IT sample custody tape for transport.

Laboratory prepared trip blanks, containing distilled deionized water, will accompany sample containers to and from the field at a rate of one per day or one per shipment, whichever is less. Trip blanks will be analyzed for volatile organic compounds plus an additional 15 peak computer search.

Field blanks will be collected at a rate of one per day per sample matrix, and will be analyzed for the appropriate parameters. Laboratory demonstrated analyte-free water will be poured over sampling apparatus and collected in approved containers.

#### 4.0 PHASE II

Phase II will be formulated using Phase I results as a guideline for where to further investigate. A boring and sampling program will be used to delineate the verticle and horizontal migration. An estimated cost for a days drilling is between \$4,000-\$6,000. This does not include laboratory analysis.

FIELD

Labor

\$1,778.00

1 Hydrogeologist  
1 Field Analytical Sampling  
Technician  
1 Technician  
2 Utility Vehicles

Equipment

\$290.00

1 H-Nu  
1 Core Sampler  
1 Hand Auger

Materials

\$300.00

Gloves  
Distilled H<sub>2</sub>O  
Nitric Acid (Decon)  
Sample Jars

\$2,841.00  
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LABORATORY ANALYSIS

BAKER CORTLANDT PROPERTIES

H.S.L. Volatiles	Water	\$220.00
	Soils	\$275.00

H.C.L. Metals	Water	\$275.00
	Soils	\$350.00

Cyanide	\$50.00
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Phenal	\$30.00
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Leaching Fields

8 samples	
4 seds	\$705.00 x 4 = \$2,820.00
4 liquids	\$575.00 x 4 = \$2,300.00

Outfall Box

1 liquid	\$ 575.00
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Stream

3 Seds	\$705.00 x 3 = \$2,115.00
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Building

1 concrete chip	\$ 600.00
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SUB-TOTAL	----- \$8,410.00
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FIELD	----- \$2,841.00
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TOTAL	----- \$11,251.00 =====
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